5.4 AIR QUALITY

This chapter assesses the air quality impacts associated with the implementation of additional housing for Alternative 5 under SOCIO-1b. This analysis was conducted by Illingworth and Rodkin.

Mitigation Measure SOCIO-1b, which would apply to Alternative 5, proposes additional housing in the Bay View and NASA Research Park areas. The addition of student apartments, dormitories, townhomes and apartments along with the reduction of some office uses would result in higher air pollutant emissions due to additional construction. With the implementation of the additional housing mitigation measure, air pollutant emissions are predicted to be about 20 to 30 percent higher than emissions associated with Alternative 5 as analyzed in the Draft Programmatic EIS (DPEIS), which did not include Mitigation Measure SOCIO-1b. However, these impacts would still be within the significance thresholds identified for Alternatives 2 through 5 in the DPEIS and would remain the same mitigation measures as in the EIS.

Maximum annual construction and operational emissions both with and without the additional housing are shown in Table 5.4-1. Without appropriate mitigation, annual NOx emissions would exceed de minimus levels for both NOx and CO. NOx emissions are predicted at 99.4 tonnes per year (109 tons per year) if constructed over a 10-year build-out period, which would exceed allowed de minimus levels of 91 tonnes (100 tons) per year. If the build out period were increased to 11 years, then annual NOx emissions are predicted at 91 tonnes per year (100 tons per year). Mitigation Measure AQ-2 already requires that the project be phased so that it would fall within the de minimus levels. As with Alternative 5 as analyzed in the DPEIS, CO emissions with the additional housing would exceed the de minimus levels, requiring a CO SIP conformity determination. Emissions of ROG with the additional housing would remain below the de minimus level.

Daily operational emissions would be about 30 to 35 percent greater with the additional housing than would be operational emissions associated with the Alternative 5 as analyzed in the DPEIS. These emissions are reported in Table 5.4-2. Daily emissions associated with this alternative would exceed the

TABLE 5.4-1 **MAXIMUM ANNUAL CONSTRUCTION AND OPERATIONAL EMISSIONS IN KILOGRAMS PER DAY (POUNDS PER DAY)**

Description	ROG	NOx	CO
Alternative 5 (10-year build out)	13 (15)	83 (91)	287 (315)
Alternative 5 w/additional housing (10-year build out)	17 (19)	99 (109)	380 (417)
Alternative 5 w/additional housing (11-year build out)	15 (17)	91 (100)	356 (390)
de minimus levels	*91 (100)*	*91 (100)*	*91 (100)*

TABLE 5.4-2 **AIR POLLUTANT EMISSIONS ASSOCIATED WITH PROJECT OPERATION IN KILOGRAMS PER DAY (POUNDS PER DAY)**

Description	2010 (~75% Build Out)			2015 (~100% Build Out)		
	ROG	NOx	PM_{10}	ROG	NOx	PM_{10}
Alternative 5 (from DPEIS)	28 (62)	87 (193)	34 (76)	25 (56)	104 (230)	47 (101)
Alternative 5 w/additional housing)	37 (82)	113 (250)	46 (102)	38 (85)	135 (299)	62 (137)
BAAQMD Thresholds	36 (80)	36 (80)	36 (80)	36 (80)	36 (80)	36 (80)

BAAQMD significance thresholds for ROG, NOx and PM_{10} at both 75 percent and 100 percent build out. Emissions associated with the Alternative 5 scenario

analyzed in the DPEIS exceeded the BAAQMD significance thresholds for NOx and PM_{10} only. This would be a significant impact, as is already disclosed in Impact AQ-1 of the Draft EIS.

The addition of housing as mitigation under Alternative 5 would not increase peak-hour traffic. Therefore, carbon monoxide concentrations associated with Alternative 5 with additional housing would be equal or less than those that were predicted under Alternative 5 as analyzed in the DPEIS. As a result, the project would conform to the approved Carbon Monoxide SIP (BAAQMD 1994), since violations of the carbon monoxide ambient air quality standards are not predicted.